



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

m'

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/010,968	11/13/2001	Daniel M. Elliott	2803.11US02	5705
24113	7590	03/09/2004	EXAMINER	
PATTERSON, THUENTE, SKAAR & CHRISTENSEN, P.A. 4800 IDS CENTER 80 SOUTH 8TH STREET MINNEAPOLIS, MN 55402-2100			GILBERT, SAMUEL G	
		ART UNIT		PAPER NUMBER
		3736		11
DATE MAILED: 03/09/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/010,968	ELLIOTT ET AL.
Examiner	Art Unit	
Samuel G Gilbert	3736	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 12/15/03.
- 2a) This action is **FINAL**.                                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 3-14, 16-31, 38-49, 51-55, 58, 60, 61 and 64-74 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) 19-31, 38, 44-47, 49, 52-55, 58, 60, 61 and 66-74 is/are allowed.
- 6) Claim(s) 3-6, 9-13, 16-18, 39, 48, 51 and 64 is/are rejected.
- 7) Claim(s) 7, 8, 14, 40-43 and 65 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_
- 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date \_\_\_\_\_
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_

## DETAILED ACTION

### ***Priority***

An application in which the benefits of an earlier application are desired must contain a specific reference to the prior application(s) in the first sentence of the specification or in an application data sheet (37 CFR 1.78(a)(2) and (a)(5)). The specific reference to any prior nonprovisional application must include the relationship (i.e., continuation, divisional, or continuation-in-part) between the applications except when the reference is to a prior application of a CPA assigned the same application number.

The status of the applications recited in the reference contained in the first sentence should be updated.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-6, 9-13, 39, 48 and 64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fontayne et al(6554759) herein after Fontayne in view of Wang et al(5524180) herein after Wang.

Claims 3-5, 48 - Fontayne teaches a targeting fixture and method of using to guide implantation needles in x-y-z movement into a patient using a predetermined plan as disclosed. The targeting fixture is manually moved by the operator. The apparatus

includes a needle -2540-, a storage structure -2570- and the mechanical structure to move the device in the x-y-z direction, however the mechanical structure is not automated and control structure is not provided. The replacement of manual operation with an automatic operation is a design consideration within the skill of the art. In re Venner, 262 F.2d 91, 120 USPQ 192 (CCPA 1955). Wang teaches an automatic device for placing a medical probe in a patient by automatically moving it in x-y-z movement using a robotic arm and computer controls including manual input. It would have been obvious to one of ordinary skill in the art at the time the invention was made to automate the planned procedure of Fontayne by using a automating the arm of Fontayne and using a computer control to automatically follow the plan as described. Automating the system would eliminate the possibility of human error in placing the seeds at the correct location. Human error is a well known problem in the medical arts and in some applications has been effectively eliminated by the use of automated computer controlled systems.

Claims 6, 9 and 10 – Wang teaches the use of a foot petal input device for the control system. The combination of Fontayne and Wang would not require the physical incorporation of the foot petal input system any known input system could be used to provide control signals by the user. The examiner's position is that a joystick could be used in place of the foot petal as a substitution of functionally equivalent elements.

Claim 11 – the above combination teaches a device as claimed but does not teach an automated motion control for the ultrasound probe. It is the examiner's

position that to automate the ultrasound probe would have been obvious for the same reasons as for automating the needle targeting structure as set forth above.

Claims 12 and 13 – the zero plane is set in column 6 line 50 of Fontayne.

Claims 39 and 64 – the examiner is taking –710- as a base, a stand –740-, and a movable assembly –110-.

Claims 16-18 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fontayne et al(6554759) herein after Fontayne in view of Wang et al(5524180) herein after Wang as applied to claims 3-6 and 9-13 above, and further in view of Burdette et al (6,129,670) herein after Burdette. The above combination teaches a device that automatically places brachytherapy seeds using a robotic arm and an ultrasonic imaging device for determining the position of the seeds however the images are not automatically taken in real time a placed In storage as claimed. Burdette teaches a brachytherapy system that uses real time ultrasonic images to develop a translucent volume image to more precisely locate the seeds, the images are stored for future use as well. Applicant's attention is invited to column 7, lines 1-30. Using the system taught by Burdette with the combination of Fontayne and Wang allows for real time use of a translucent image which provides greater accuracy in placing the brachytherapy seeds as taught by Burdette.

Claim 51 – The method of using the combination as set forth includes using an ultrasound probe to set a base plain, Using a robot arm and automated controls to guide the needle and real time imaging means to capture and storing the claimed images.

***Allowable Subject Matter***

Claims 7, 8, 14, 40-43, and 65 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 19-31, 38, 44-47, 49, 52-55, 58, 60, 61, and 66-74 are allowed.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patents 5,951,461 and 6,540,656 teaches a related targeting fixture for brachytherapy.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samuel G Gilbert whose telephone number is 703-308-3553. The examiner can normally be reached on M-F 5:30-2:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Max Hindenburg can be reached on 703-308-3130. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3736

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Samuel G Gilbert  
Primary Examiner  
Art Unit 3736

sgg